

ABSTRACT

This invention relates to the field of blood treatment devices having a blood purification element (1) which is divided into two chambers by a semipermeable membrane (3). Such devices are used as hemodialysis machines in artificial kidney therapy. This invention improves upon such a blood treatment device to the extent that nonphysiological conditions of the patient, in particular critical potassium concentrations and withdrawal rates can be better prevented during the blood treatment. According to this invention, it is provided that the analyzer unit (32) of the blood treatment device determines on the basis of at least one sensor (31) the concentration of this substance in the blood in the blood inlet line, the instantaneous transfer rate of this substance through the membrane and the total quantity of this substance withdrawn during the treatment; this concentration is compared with a first admissible value range, the transfer rate is compared with a second admissible value range and the quantity of the substance withdrawn is compared with a third value range; and the control unit (34) which controls the blood treatment device can instruct the device to the extent that the blood treatment device performs the blood treatment while maintaining all three admissible value ranges.

Fig.